

S. Kaushal

# 7/1/01  
9/27/01 OIPE

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/516,493

DATE: 07/18/2001

TIME: 10:37:01

Input Set : A:\96700-613.2.ST25.txt

Output Set: N:\CRF3\07182001\I516493.raw

ENTERED

3 <110> APPLICANT: Charron, Maureen  
 4     Katz, Ellen  
 6 <120> TITLE OF INVENTION: NOVEL GLUCOSE TRANSPORTER/SENSOR PROTEIN AND USES THEREOF  
 8 <130> FILE REFERENCE: 96700/613  
 10 <140> CURRENT APPLICATION NUMBER: US 09/516,493  
 12 <141> CURRENT FILING DATE: 2000-03-01  
 14 <150> PRIOR APPLICATION NUMBER: US 09/356,602  
 16 <151> PRIOR FILING DATE: 1999-07-19  
 18 <160> NUMBER OF SEQ ID NOS: 12  
 20 <170> SOFTWARE: PatentIn version 3.0  
 23 <210> SEQ ID NO: 1  
 25 <211> LENGTH: 98  
 27 <212> TYPE: PRT  
 29 <213> ORGANISM: mouse  
 31 <400> SEQUENCE: 1  
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 34 1                     5                     10                     15  
 36 Pro Ile Pro Trp Phe Val Ala Glu Leu Phe Ser Gln Gly Pro Arg Pro  
 37                     20                     25                     30  
 39 Ala Ala Met Ala Val Arg Gly Phe Ser Asn Trp Thr Cys Asn Phe Ile  
 40                     35                     40                     45  
 42 Val Gly Met Gly Phe Gln Tyr Val Ala Asp Arg Met Gly Pro Tyr Val  
 43                     50                     55                     60  
 45 Phe Leu Leu Phe Ala Val Leu Leu Leu Gly Phe Phe Ile Phe Thr Phe  
 46 65                     70                     75                     80  
 48 Leu Lys Val Pro Glu Thr Arg Gly Arg Thr Phe Asp Gln Ile Ser Ala  
 49                     85                     90                     95  
 51 Ala Phe  
 54 <210> SEQ ID NO: 2  
 56 <211> LENGTH: 100  
 58 <212> TYPE: PRT  
 60 <213> ORGANISM: mouse  
 62 <400> SEQUENCE: 2  
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 65 1                     5                     10                     15  
 67 Pro Ile Pro Trp Leu Leu Met Ser Glu Ile Phe Pro Leu His Ile Lys  
 68                     20                     25                     30  
 70 Gly Val Ala Thr Gly Val Cys Val Leu Thr Asn Trp Phe Met Ala Phe  
 71                     35                     40                     45  
 73 Leu Val Thr Lys Glu Phe Asn Ser Ile Met Glu Ile Leu Arg Pro Tyr  
 74                     50                     55                     60  
 76 Gly Ala Phe Trp Leu Thr Ala Ala Phe Cys Ile Leu Ser Val Leu Phe  
 77 65                     70                     75                     80  
 79 Thr Leu Thr Phe Val Pro Glu Thr Lys Gly Arg Thr Leu Glu Gln Ile  
 80                     85                     90                     95  
 82 Thr Ala His Phe  
 84                     100

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87 <210> SEQ ID NO: 3
89 <211> LENGTH: 50
91 <212> TYPE: PRT
93 <213> ORGANISM: Saccharomyces
95 <400> SEQUENCE: 3
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98 1          5          10          15
100 Gly Val Val Trp Val Val Ser Ala Glu Leu Tyr Pro Leu Gly Val Arg
101          20          25          30
103 Ser Lys Cys Thr Ala Ile Cys Ala Ala Ala Asn Trp Leu Val Asn Phe
104          35          40          45
106 Thr Cys
107      50
110 <210> SEQ ID NO: 4
112 <211> LENGTH: 50
114 <212> TYPE: PRT
116 <213> ORGANISM: Saccharomyces
118 <400> SEQUENCE: 4
120 Ile Ala Phe Ile Cys Leu Phe Ile Ala Ala Phe Ser Ala Thr Trp Gly
121 1          5          10          15
123 Gly Val Val Trp Val Ile Ser Ala Glu Leu Tyr Pro Leu Gly Val Arg
124          20          25          30
126 Ser Lys Cys Thr Ala Ile Cys Ala Ala Ala Asn Trp Leu Val Asn Phe
127          35          40          45
129 Ile Cys
130      50
133 <210> SEQ ID NO: 5
135 <211> LENGTH: 50
137 <212> TYPE: PRT
139 <213> ORGANISM: Saccharomyces
141 <400> SEQUENCE: 5
143 Val Gly Ser Met Cys Leu Phe Ile Ala Gly Phe Arg Val Gly Trp Gly
144 1          5          10          15
146 Pro Ile Pro Trp Leu Leu Met Ser Glu Ile Phe Pro Leu His Ile Lys
147          20          25          30
149 Gly Val Ala Thr Gly Val Cys Val Leu Thr Asn Trp Phe Met Ala Phe
150          35          40          45
152 Leu Val
153      50
156 <210> SEQ ID NO: 6
158 <211> LENGTH: 1813
160 <212> TYPE: DNA
162 <213> ORGANISM: homo sapiens
164 <220> FEATURE:
166 <221> NAME/KEY: Unsure
168 <222> LOCATION: (1697)..(1697)
170 <223> OTHER INFORMATION: 'n' may be any one of a, t, c, or g
172 <400> SEQUENCE: 6
174 aacttgccgc cgccgcgtct tcctcgccgc cttcgccgct gccctgggcc cactcagctt      60

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176 cggcttcgcg ctcggtacac gctccccggc catccctagc ctgcagcgcg ccgcgcccc 120
178 ggccccgcgc ctggacgacg ccgcccgcctc ctggttcggg gctgtcgtga ccctgggtgc 180
180 cgcggcgggg ggagtgtggt gcggtgggt ggtggaccgc gccgggcgca agctgagcct 240
182 cttgctgtgc tccgtgccct tegtggccgg ctttgccgtc atcaccgcgg ccaggagcgt 300
184 gtggatgctg ctggggggcc gcctcctcac cggcctggcc tgcgggtgtg cctccctagt 360
186 ggccccggtc tacatctccg aaatcgccta cccagcagtc cgggggttgc tcggctcctg 420
188 tgtgcagcta atggtcgtcg tcggcatcct cctggcctac ctggcaggct ggggtcgtga 480
190 gtggcgctgg ctggtgtgtg tgggtgtggt gccccctcc ctcatgtgc ttctcatgtg 540
192 cttcatgccc gagacccgcg gcttctgtgt gactcagcac aggcgccagg aggccatcgc 600
194 cctgcggttc ctgtgggggt ccgagcaggg ctgggaagac ccccccatcg gggctgagca 660
196 gagctttcac ctggccctgc tgcggcagcc cggcatctac aagcccttca tcacgggtgt 720
198 ctccctgatg gccttcagc agctgtcggg ggtcaacgcc gtcatgttct atgcagagac 780
200 catctttgaa gaggccaagt tcaaggacag cagcctggcc tcggtcgtcg tgggtgtcat 840
202 ccagggtgctg ttcacagctg tggcggtctt catcatggac agagcagggc ggaggctgct 900
204 cctggtcttg tcagggtgtg tcatggtgtt cagcacgagt gccttcggcg cctacttcaa 960
206 gctgacccag ggtggccctg gcaactcctc gcacgtggcc atctcggcg ctgtctctgc 1020
208 acagcctggt gatgccagcg tggggtgtgc ctggtgtggc gtgggcagca tgtgcctctt 1080
210 catgcggcg tttgcgggtg gctgggggccc catccctgtg ctctcatgt cagagatctt 1140
212 cctctgcat gtcaagggcg tggcgacagg catctgcgtc ctaccaact ggctcatggc 1200
214 ctttctcgtg accaaggagt tcagcagcct catggaggtc ctcaggccct atggagcctt 1260
216 ctggcttgcc tccgctttct gcattctcag tgtccttttc actttgttct gtgtccctga 1320
218 aactaaagga aagactctgg aacaaatcac agcccatttt gagggcgcat gacagccact 1380
220 cactagggga tggagcaagc ctgtgactcc aagctgggccc caagcccaga gccctgctt 1440
222 gccccagggg agccagaatc cagccccttg gaggcttggt ctgcagggtc cctccttctt 1500
224 gtcatgtctc ctccagccca tgaccggggg ctaggaggct cactgcctcc tgttccagct 1560
226 cctgctgctg ctctgaggac tcaggaacac cttcagactt tgcagacctg cggtcagccc 1620
228 tccatgcgca agactaaagc agcggaagag gaggtgggccc tctaggatct ttgtcttctg 1680
w 230 gctggagggtg cttttgnagg ttgggtgctg ggcattcggg cgctcctctc acggggtgctg 1740
232 cttatcgga aggaatttg tttgccaat aaagacgtga cacagaaaat caaaaaaaaa 1800
234 aaaaaaaaaat tcc 1813

```

237 &lt;210&gt; SEQ ID NO: 7

239 &lt;211&gt; LENGTH: 453

241 &lt;212&gt; TYPE: PRT

243 &lt;213&gt; ORGANISM: homo sapiens

245 &lt;400&gt; SEQUENCE: 7

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247 Arg Arg Val Phe Leu Ala Ala Phe Ala Ala Ala Leu Gly Pro Leu Ser
248 1 5 10 15
250 Phe Gly Phe Ala Leu Gly Tyr Ser Ser Pro Ala Ile Pro Ser Leu Gln
251 20 25 30
253 Arg Ala Ala Pro Pro Ala Pro Arg Leu Asp Asp Ala Ala Ala Ser Trp
254 35 40 45
256 Phe Gly Ala Val Val Thr Leu Gly Ala Ala Ala Gly Gly Val Leu Gly
257 50 55 60
259 Gly Trp Leu Val Asp Arg Ala Gly Arg Lys Leu Ser Leu Leu Leu Cys
260 65 70 75 80
262 Ser Val Pro Phe Val Ala Gly Phe Ala Val Ile Thr Ala Ala Gln Asp
263 85 90 95
265 Val Trp Met Leu Leu Gly Gly Arg Leu Leu Thr Gly Leu Ala Cys Gly
266 100 105 110

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268 Val Ala Ser Leu Val Ala Pro Val Tyr Ile Ser Glu Ile Ala Tyr Pro
269      115      120      125
271 Ala Val Arg Gly Leu Leu Gly Ser Cys Val Gln Leu Met Val Val Val
272      130      135      140
274 Gly Ile Leu Leu Ala Tyr Leu Ala Gly Trp Val Leu Glu Trp Arg Trp
275 145      150      155      160
277 Leu Ala Val Leu Gly Cys Val Pro Pro Ser Leu Met Leu Leu Leu Met
278      165      170      175
280 Cys Phe Met Pro Glu Thr Pro Arg Phe Leu Leu Thr Gln His Arg Arg
281      180      185      190
283 Gln Glu Ala Ile Ala Leu Arg Phe Leu Trp Gly Ser Glu Gln Gly Trp
284      195      200      205
286 Glu Asp Pro Pro Ile Gly Ala Glu Gln Ser Phe His Leu Ala Leu Leu
287      210      215      220
289 Arg Gln Pro Gly Ile Tyr Lys Pro Phe Ile Ile Gly Val Ser Leu Met
290 225      230      235      240
292 Ala Phe Gln Gln Leu Ser Gly Val Asn Ala Val Met Phe Tyr Ala Glu
293      245      250      255
295 Thr Ile Phe Glu Glu Ala Lys Phe Lys Asp Ser Ser Leu Ala Ser Val
296      260      265      270
298 Val Val Gly Val Ile Gln Val Leu Phe Thr Ala Val Ala Ala Leu Ile
299      275      280      285
301 Met Asp Arg Ala Gly Arg Arg Leu Leu Leu Val Leu Ser Gly Val Val
302      290      295      300
304 Met Val Phe Ser Thr Ser Ala Phe Gly Ala Tyr Phe Lys Leu Thr Gln
305 305      310      315      320
307 Gly Gly Pro Gly Asn Ser Ser His Val Ala Ile Ser Ala Pro Val Ser
308      325      330      335
310 Ala Gln Pro Val Asp Ala Ser Val Gly Leu Ala Trp Leu Ala Val Gly
311      340      345      350
313 Ser Met Cys Leu Phe Ile Ala Gly Phe Ala Val Gly Trp Gly Pro Ile
314      355      360      365
316 Pro Trp Leu Leu Met Ser Glu Ile Phe Pro Leu His Val Lys Gly Val
317      370      375      380
319 Ala Thr Gly Ile Cys Val Leu Thr Asn Trp Leu Met Ala Phe Leu Val
320 385      390      395      400
322 Thr Lys Glu Phe Ser Ser Leu Met Glu Val Leu Arg Pro Tyr Gly Ala
323      405      410      415
326 Phe Trp Leu Ala Ser Ala Phe Cys Ile Phe Ser Val Leu Phe Thr Leu
327      420      425      430
329 Phe Cys Val Pro Glu Thr Lys Gly Lys Thr Leu Glu Gln Ile Thr Ala
330      435      440      445
332 His Phe Glu Gly Arg
333      450
336 <210> SEQ ID NO: 8
338 <211> LENGTH: 53
340 <212> TYPE: PRT
342 <213> ORGANISM: homo sapiens
344 <220> FEATURE:

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346 <221> NAME/KEY: varsplic
348 <222> LOCATION: (1)..(53)
350 <223> OTHER INFORMATION: possible alternate carboxy terminus of predicted
351     amino acid sequence of human GLUTx protein
353 <400> SEQUENCE: 8
355 Gln Pro Leu Thr Arg Gly Trp Ser Lys Pro Val Thr Pro Ser Trp Ala
356 1             5             10             15
358 Gln Ala Gln Ser Pro Cys Leu Pro Gln Gly Ser Gln Asn Pro Ala Pro
359             20             25             30
361 Trp Ser Leu Gly Leu Gln Gly Pro Ser Phe Leu Ser Cys Ser Leu Gln
362             35             40             45
364 Pro Met Thr Arg Gly
365             50
368 <210> SEQ ID NO: 9
370 <211> LENGTH: 1037
372 <212> TYPE: DNA
374 <213> ORGANISM: rat
376 <220> FEATURE:
378 <221> NAME/KEY: unsure
380 <222> LOCATION: (606)..(609)
382 <223> OTHER INFORMATION: 'n' may be any one of a, t, c, or g
384 <400> SEQUENCE: 9
386 tggcggccgc tctagaacta gtggatcccc cgggctgcag gaattcggca cgagctggtg      60
388 cccatctccg cagagcctgc tgatgttcac ctggggctgg cctggctggc tgtaggcagc      120
390 atgtgcctct tcatcgctgg ttttgcagta ggctggggac ccatcccctg gctcctcatg      180
392 tcagagatct tccctctgca catcaagggt gtggctaccg gcgtctgtgt cctcaccaac      240
394 tggttcatgg cctttctggt gaccaaagag tttaacagca tcatggagat cctcagaccc      300
396 tacggcgccct tctggctcac cgctgccttc tgtatcctca gcgtcctttt cacgctcacc      360
398 tttgtccctg agactaaagg caggactctg gaacaaatca cagcccattt gagggacggg      420
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402 gtggagtggc ctcaagtacc acagtttgag cccagggggc ccctgactcc tcagatttcc      540
404 gggccagctt tgtccagatc tcaaccaga ttccacacca tgagcttcac cagattctga      600
406 ggctctgna gcctgtgca cacacagcac atttgcgggc tcctggctct agtgctctgg 660
408 ctgggcatct ttgggggtgct tggtcctaag caactgccca tacctcactt gactggggga      720
410 tgagaaaagg acttagccac ataagatttg ggctcagaaa caaggtcagg tgagtccagg      780
412 aagaaaagag aatggttctt gtcttgtcaa ccaagtcctt ctcagagtgc caaagacctc      840
414 cggattcacc ttggggttag ccagcttacc catcacttac aggttctctc caactctcag      900
416 ctggtctcag tgtcctggat cattagtcac caggtcttgt tgagtttcag aaaaataaaa      960
418 ggcctctttc cgttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa     1020
420 aaactcgagg gggggcc                                     1037
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425 <211> LENGTH: 165
427 <212> TYPE: PRT
429 <213> ORGANISM: rat
431 <400> SEQUENCE: 10
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434 1             5             10             15
436 His Glu Leu Val Pro Ile Ser Ala Glu Pro Ala Asp Val His Leu Gly
437             20             25             30

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**VERIFICATION SUMMARY**

PATENT APPLICATION: US/09/516,493

DATE: 07/18/2001

TIME: 10:37:02

Input Set : A:\96700-613.2.ST25.txt

Output Set: N:\CRF3\07182001\I516493.raw

L:230 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6

L:406 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9